

REMARKS

The present document is submitted in response to the final Office Action dated May 12, 2008 ("Office Action").

Applicants have amended claims 2, 5, and 6 to more particularly and distinctly point out the subject matter that they deem as their invention. Support for the amendments can be found at various places in the specification, e.g., page 3, lines 11, and page 6, lines 16-17. Further, Applicants have cancelled claim 39. No new matter has been introduced.

Upon entry of the present amendments, claims 2-6, 10, 11, 13, 15-18, 21-38, and 40-45 will be pending. Note that claims 1, 7-9, 12, 14, 19, and 20 were cancelled previously. Among the pending claims, claims 17, 18, 21-38 and 40-45 have been withdrawn from consideration and claims 2-6, 10, 11, 13, 15, and 16 are under examination.

Applicants respectfully request that the Examiner reconsider this application in view of the following remarks.

Claims 2-6, 10, 11, 13, 15, 16, and 39 are rejected for lack of written description. See the Office Action, pages 2-5. This is actually a new matter rejection. More specifically, the Examiner holds the position that the following four phrases/clauses, all of which were added to certain rejected claims during prosecution, have no support in the specification as originally filed:

- (i) a target molecule that includes a Class II MHC binding site and a T cell receptor binding site,
- (ii) the T cell binding site having one or more mutations that reduce its T cell proliferation activity,
- (iii) wherein the mutated T cell receptor binding site reduces the T cell proliferation activity to equal to or greater than 100,000 fold, and
- (iv) wherein the conjugate binds to a Class II MHC molecule.

See the Office Action, page 3, second paragraph, and page 5, third paragraph.

Applicants have removed phrases/clauses (i), (ii), and (iv) from the rejected claims that recite one or more of them; and have cancelled claim 39, which is the only claim that recites clause (iii).¹ It is respectfully submitted that these amendments have rendered moot the Examiner's ground for rejection.

Of note, this new matter rejection is the only rejection remaining in the present application. For the reasons set forth above, Applicants respectfully submit that all of the claims under examination are now in condition for allowance.

CONCLUSION

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of

¹ For a complete record, Applicants provide explanations below why, like previously presented claim 2, newly amended claim 2 is also novel over Yamaoka et al., a previously cited reference.

Applicants have replaced clause (iv), i.e., "wherein the conjugate binds to a Class II MHC molecule," recited in previously presented claim 2, with a new clause "wherein the conjugate is effective in antigen presentation." Note that, in previous communications, Applicants added clause (iv) to original claim 2 and successfully obviated the anticipation rejection over Yamaoka et al. See Applicants' reply to the office action dated October 26, 2006 and the office action dated August 27, 2007. Applicants now address the novelty of claim 2, as now amended, in view of Yamaoka et al.

Amended claim 2 covers a conjugate containing two parts: an antigen, and a mutated superantigen having a mutation(s) in its T cell binding site. This claim also requires that the conjugate be effective in antigen presentation.

As pointed out in Applicants' reply to the action of October 26, 2006, Yamaoka et al. discloses GST-fusion superantigen mutants, in which the GST portion is fused to the N-terminal of the superantigen mutants. See page 5021, left column. Also pointed out in that reply, according to Yamaoka et al., the N-terminal region of a superantigen is critical for its binding to a Class II MHC molecule. See page 5021, right column. In other words, this reference teaches that a peptide fused to the N-terminal of a superantigen would interfere with its binding to a Class II MHC molecule. In view of this teaching, a skilled person in the art would readily recognize that the GST-fusion superantigen mutants disclosed in Yamaoka would NOT bind to a Class II MHC molecule. It is well known in the art that binding to a MHC molecule (e.g., a MHC Class II molecule) is a prerequisite to antigen presentation, i.e., the display of peptides by MHC molecules for T cell receptors recognition. See the definition of "antigen presentation" in Appendix I Glossary, Abbas et al., Cellular and Molecular Immunology, 4th ed, at page 470; copy attached as Exhibit 1. Thus, a skilled artisan would also know that the Yamaoka fusion proteins, lacking the ability of binding to a MHC Class II molecule, would NOT be effective in antigen presentation, as required by amended claim 2.

For at least the reasons set forth above, Applicants submit that the Yamaoka fusion proteins are different from the conjugate of claim 2 as now amended. More specifically, the latter is effective in antigen presentation while the former are not. Thus, currently amended claim 2 is novel over Yamaoka et al. So are claims 3-6, 10, 11, 13, 15, and 16, all of which depend from claim 2.

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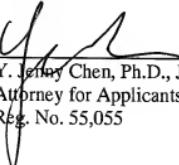
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any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

The Petition for Extension of Time fee in the amount of \$ 60 is being paid concurrently herewith on the Electronic Filing System (EFS) by way of Deposit Account authorization. Please apply any other charges to Deposit Account No. 50-4189, referencing Attorney Docket No. 55503-002001.

Respectfully submitted,

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Exhibit 1

Term	Definition
Allotope	An antigenic determinant encoded by one allelic form of a polymorphic gene within a species. Allotopes usually refer to determinants on antibody molecules and are encoded by C gene alleles or framework regions of V genes.
Allotype	The property of a group of antibody molecules defined by their sharing a particular allotope; i.e., antibodies that share a particular allotope belong to the same allotype. Allotype is also often used synonymously with allotope, which refers to an antigenic determinant found on the antibodies of some individuals but not others.
Altered peptide ligands	Peptides with altered TCR contact residues that elicit responses different from the responses to native peptide ligands. Altered peptide ligands (APLs) may be important in the regulation of T cell activation in physiologic, pathologic, or therapeutic situations.
Alternative pathway of complement activation	An antibody-independent pathway of activation of the complement system that occurs when the C3b protein binds to microbial cell surfaces. The alternative pathway is a component of the innate immune system and mediates inflammatory responses to infection, as well as direct lysis of microbes.
Anaphylactic shock	Cardiovascular collapse occurring in the setting of a systemic immediate hypersensitivity reaction.
Anaphylatoxins	The C5a, C4a, and C3a complement fragments that are generated during complement activation. The anaphylatoxins bind specific cell surface receptors and promote acute inflammation by stimulating neutrophil chemotaxis and activating mast cells. At high concentrations, anaphylatoxins activate enough mast cells to mimic anaphylaxis.
Anaphylaxis	An extreme systemic form of immediate hypersensitivity in which mast cell or basophil mediators cause bronchial constriction, massive tissue edema, and cardiovascular collapse.
Anchor residues	The amino acid residues of a peptide whose side chains fit into pockets in the peptide-binding cleft of an MHC molecule. The side chains bind to complementary amino acids in the MHC molecule and therefore serve to anchor the peptide in the cleft of the MHC molecule.
Anergy	A state of unresponsiveness to antigenic stimulation. Clinically, anergy describes the lack of T cell-dependent cutaneous delayed-type hypersensitivity (DTH) reactions to common antigens. Lymphocyte anergy (also called clonal anergy) is the failure of clones of T or B cells to react to antigen and may be a mechanism of maintaining immunologic tolerance to self.
Angiogenesis	New blood vessel formation regulated by a variety of protein factors elaborated by cells of the innate and adaptive immune systems and often accompanying chronic inflammation.
Antagonist peptide	Variant peptide ligands of a TCR in which one or two TCR contact residues have been changed and in which negative signals are delivered to specific T cells that inhibit responses to native peptides.
Antibody	A type of glycoprotein molecule, also called Ig, produced by B lymphocytes that binds antigens, often with a high degree of specificity and affinity. The basic structural unit of an antibody is composed of two identical heavy chains and two identical light chains. N-terminal variable regions of the heavy and light chains form the antigen-binding sites, whereas the C-terminal constant regions of the heavy chains functionally interact with other molecules in the immune system. Every individual has millions of different antibodies, each with a unique antigen-binding site. Secreted antibodies perform various effector functions, including neutralizing antigens, activating complement, and promoting leukocyte-dependent destruction of microbes.
Antibody-dependent cell-mediated cytotoxicity	A process by which natural killer (NK) cells are targeted to IgG-coated cells resulting in lysis of the antibody-coated cells. A specific receptor for the constant region of IgG, called Fc γ RIII (CD16), is expressed on the NK cell membrane and mediates binding to the IgG.
Antibody feedback	The downregulation of antibody production by secreted IgG antibodies that occurs when antigen-antibody complexes simultaneously engage B cell membrane Ig and Fc γ receptors (Fc γ RIII). Under these conditions, the cytoplasmic tails of the Fc γ receptors transduce inhibitory signals inside the B cell.
Antibody repertoire	The collection of different antibody specificities expressed in an individual.
Antibody-secreting cells	A B lymphocyte that has undergone differentiation and produces the secretory form of Ig. Antibody-secreting cells are produced in response to antigen and reside in the spleen and lymph nodes, as well as in the bone marrow.
Antigen	A molecule that binds to an antibody or a TCR. Antigens that bind to antibodies include all classes of molecules. TCRs only bind peptide fragments of proteins complexed with MHC molecules; both the peptide ligand and the native protein from which it is derived are called T cell antigens.
Antigen presentation	The display of peptides bound by major histocompatibility complex (MHC) molecules on the surface of an APC that permits specific recognition by TCRs and activation of T cells.
Antigen processing	The intracellular conversion of protein antigens derived from the extracellular space or the cytosol into peptides and loading of these peptides onto MHC molecules for display to T lymphocytes.